

Work Order ID 68988

Wednesday, April 27, 2011 8:48:19 AM

Page 1

Item ID: D3195-043

Accept

Revision ID:

Item Name: Bracket Assembly

Start Date: 4/26/2011 Start Qty: 4.00

Required Date: 5/2/2011 Req'd Qty: 4.00

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

QC:

Date:

SPC (Y/N):

Date:

Run Start

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

Draw Nbr

Revision Nbr

D3195

Rev A

100

0.00



BAND SAW

Bandsaw

Memo

0.00

Jeaspa Bandsaw

Cut blanks: (1.250" x 1.500") x 3.60" long

SL 11/05/09

(4)

110

0.00



HAAS CNC VERTICAL MACHINING #1

HAAS 1

Memo

0.00

HAAS CNC vertical machine #1

1-Machine D3195-3 as per Folio FA334 and Dwg D3195-3
2-Deburr

SL 11/05/09

(4)

120

0.00



QC2- Inspect parts off machine FAI/FAIB

QC

Memo

0.00

Quality Control

SL 11/05/09

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B		Verification Section C	Approval Chief Eng	Approval QC Inspector	
			Initial Chief Eng	Action Description Chief Eng				Sign & Date

NOTE: Date & initial all entries

Work Order ID 68988

Wednesday, April 27, 2011 8:48:19 AM



Page 2

Item ID: D3195-043

Accept



Setup Start



Revision ID:

Stop



Item Name: Bracket Assembly

Start Date: 4/26/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 5/2/2011 Req'd Qty: 4.00

Customer:

Reference:

Run Start



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Stop



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

130

QC8- Inspect parts - second check

0.00



QC

Memo

0.00

Quality Control

140

Chemical Conversion Coat per QSI005 4.1

0.00



HandFinish

Memo

0.00

Hand Finishing

150

Grey Sandtex(Ref:4.3.5.6) per QSI005 4.3

0.00



Powdercoat

Memo

0.00

Powder Coating

START TIME:

FINISH TIME:

OVEN TEMPERATURE:

3250

10:30

11:00

4x ~~Ø~~ m-f 11/05/10

4x ~~Ø~~ m-f 11/05/10

M115128

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 68988

Wednesday, April 27, 2011 8:48:19 AM



Page 3

Item ID:	D3195-043	Accept		Setup	Start	
Revision ID:						
Item Name:	Bracket Assembly				Stop	
Start Date:	4/26/2011	Start Qty:	4.00			
Required Date:	5/2/2011	Req'd Qty:	4.00			
Reference:						
				Cust Item ID:		
				Customer:		

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
160 QC Quality Control	QC3- Inspect Part Finish Memo	0.00 0.00							4 11-5-10
170 Small Fab Small Fab	Small Fab Memo 1-Lightly Sand bonding surface □ 2-Bond D3195-7 into D3195-13 as per Dwg D3195 □ A/R Contact Cement <u>11/1095</u>	0.00 0.00							GP 11/09/10 (E)
180 QC Quality Control	QC5- Inspect part completeness to step on W/O Memo	0.00 0.00							8 4/25/11

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Work Order ID 68988

Wednesday, April 27, 2011 8:48:19 AM



Page 4

Item ID: D3195-043

Accept



Setup Start



Revision ID:

Stop



Item Name: Bracket Assembly

Start Date: 4/26/2011 Start Qty: 4.00



Cust Item ID:

Required Date: 5/2/2011 Req'd Qty: 4.00



Customer:

Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

190

Identify as per dwg & Stock Location 246A

0.00



Packaging

Memo

0.00

Packaging

11/5/11 40

200

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

11/5/11 [Signature]

me

11-03-11

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Wednesday, April 27, 2011 8:56:34 AM

Page 1

Work Order ID: 68988

Parent Item: D3195-043

Parent Item Name: Bracket Assembly



Start Date: 4/26/2011

Required Date: 5/2/2011

Start Qty: 4.00

Required Qty: 4.00

Comments: IPP Rev:A New Issue 05-11-08 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

D3195-7		Manufactured	No			100	Each	3.0000	1	4			
---------	--	--------------	----	--	--	-----	------	--------	---	---	--	--	--



Pad

Location

Loc Qty

Loc Code

GA

3

64534

3

M6061T6B1.500X01.25
0

Purchased No

170

f

14.2068

0.3

1.263158



6061-T6 Bar 1.50 x 1.25

Location

Loc Qty

Loc Code

MAT004

14.2068

107461

0.9

110936

13.3068

Handwritten notes:
 4/26/05/10
 B 69385 (1X)
 3
 1265

Handwritten mark:

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

DART AEROSPACE LTD		Work Order:	68988
Description: Bracket		Part Number:	D3195-3
Inspection Dwg: D3195	Rev: A	Page 1 of 1	

FIRST ARTICLE INSPECTION CHECKLIST

☒ First Article ☐ Prototype

Drawing Dimension	Tolerance	Actual Dimension	Accept	Reject	Method of Inspection	Comments
3.432	+/-0.010	3.432	/		UPIN SL-3	
1.265	+/-0.010	1.262	/		"	
R0.37	+/-0.030	.37	/		R-G	
Ø0.277	+0.005/-0.000	.279	/		"	
2.677	+/-0.005	2.677	/		"	
0.242	+/-0.010	.246	/		"	
0.377	+/-0.010	.378	/		"	
0.500	+/-0.010	.500	/		"	
R0.188	+/-0.010	.188	/		R-G	
0.250	+/-0.010	.250	/		"	
0.882	+/-0.010	.881	/		"	
1.250	+/-0.010	1.250	/		"	
0.500	+/-0.010	.500	/		"	
Ø0.191	+0.005/-0.000	.192	/		"	
1.000	+/-0.010	1.001	/		"	

Measured by:	SL	Audited by:	DP	Prototype Approval:	N/A
Date:	11/05/09	Date:	11.5.10	Date:	N/A

Rev	Date	Change	Revised by	Approved
A	04.04.20	New Issue (P/O D412-702-011/-013)	KJ/RF	
B	05.04.26	R0.37 was R0.037; 1.084 removed	KJ/JLM	

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

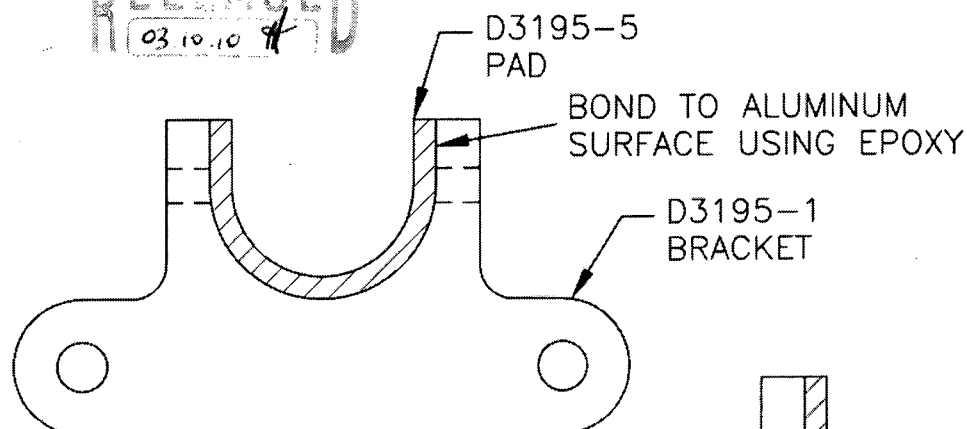
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN	CP	DRAWN BY	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED	#	APPROVED	#	DRAWING NO. D3195	REV. A SHEET 1 OF 3
DATE	03.06.23			TITLE BRACKET	SCALE 1:1
A	03.06.23			NEW ISSUE	

RELEASED
03.10.10



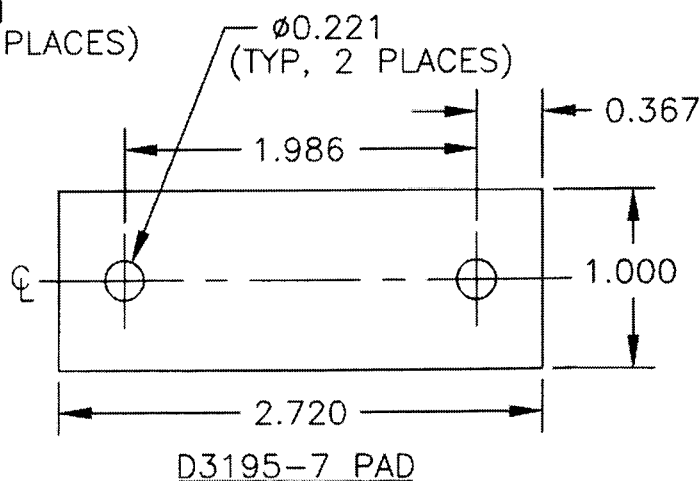
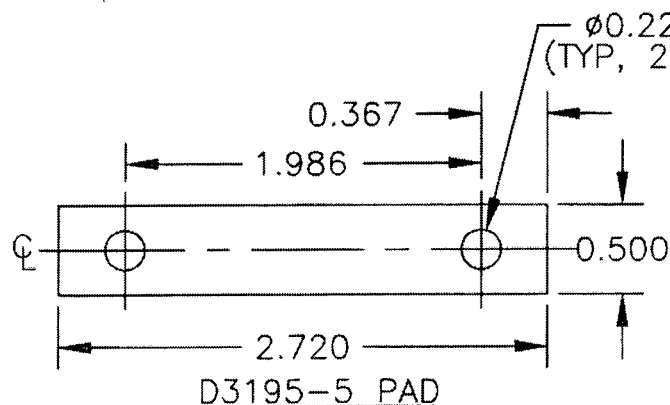
SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 68988

D3195-7
PAD

D3195-3
BRACKET

BOND TO ALUMINUM
SURFACE USING EPOXY

D3195-043
BRACKET



D3195-5 & D3195-7 PAD

- 1) MATERIAL: 60 DUROMETER NEOPRENE 1/8" THICK
(POSSIBLE SUPPLIERS, ACCURATE RUBBER)
- 2) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 3) ALL DIMENSIONS ARE IN INCHES

Copyright © 2003 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

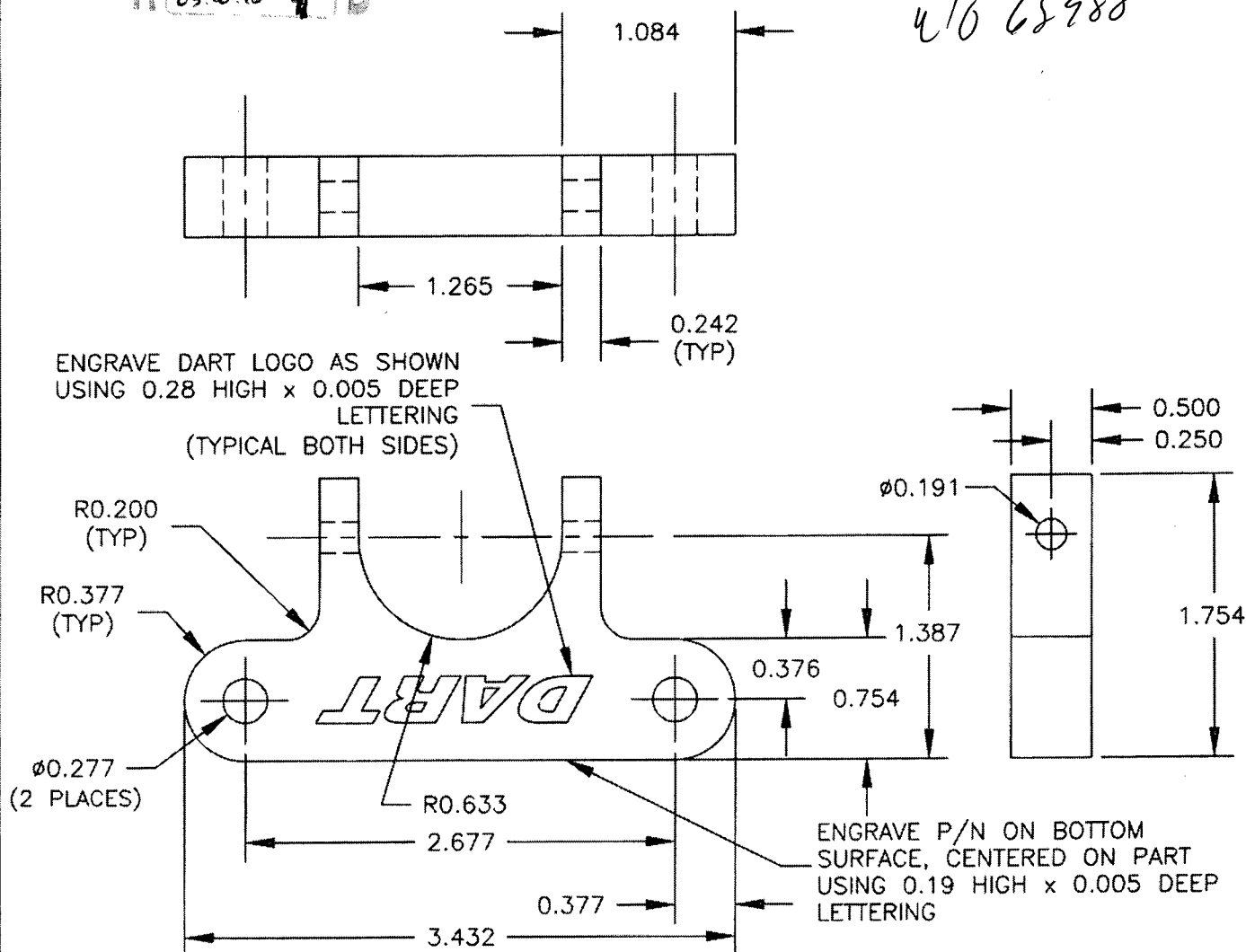
NOTE: Date & initial all entries



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3195	REV. A SHEET 2 OF 3
DATE 03.06.23		TITLE BRACKET	SCALE 1:1

RELEASED
03.10.10

4/10 65988



D3195-1 BRACKET

- 1) MATERIAL: 6061-T6/T651 (QQ-A-250/11 OR QQ-A-200/8 OR QQ-A-225/8)
(REF. DART SPEC M6061T6S OR M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

Copyright © 2003 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

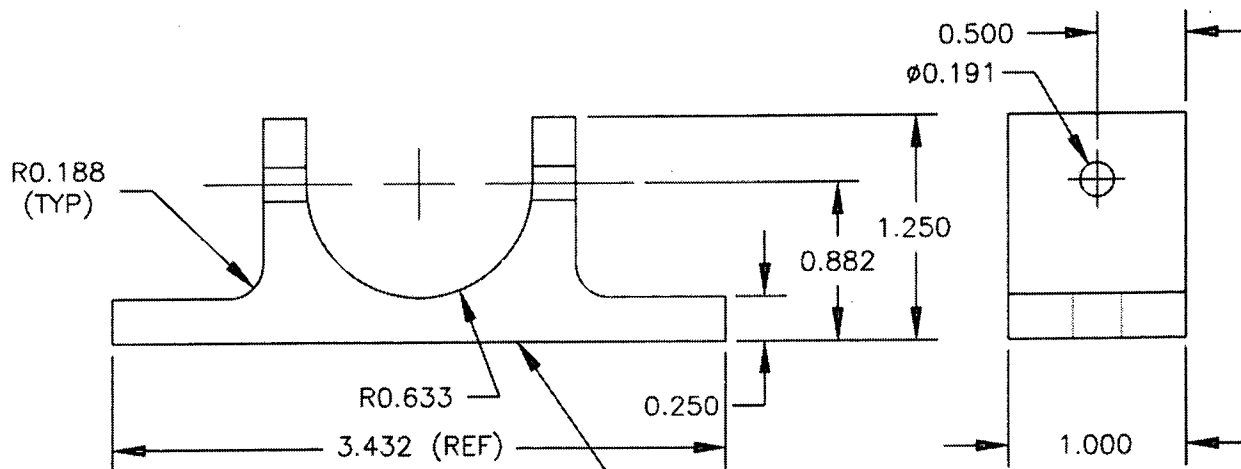
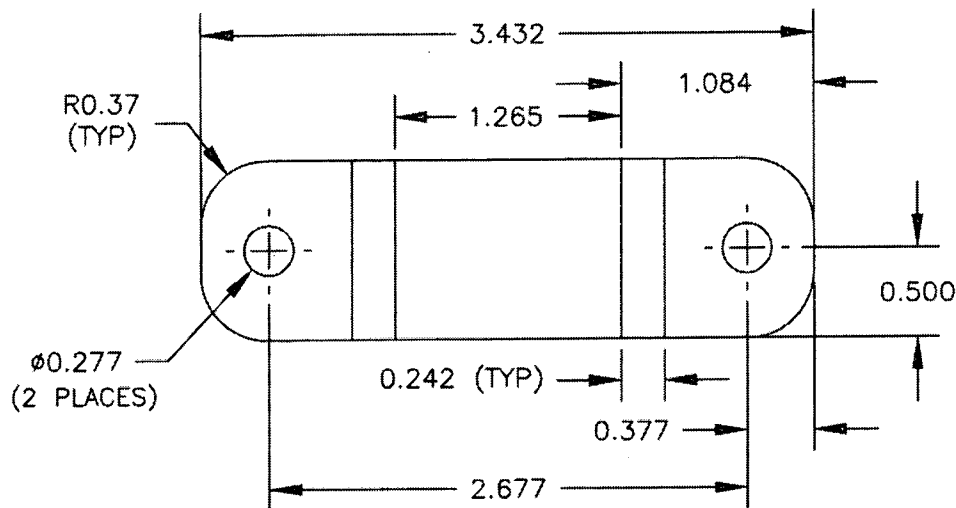
Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries



DESIGN <i>CP</i>	DRAWN BY <i>CP</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3195	REV. A SHEET 3 OF 3
DATE 03.06.23		TITLE BRACKET	SCALE 1:1



RELEASED
03.0.10

D3195-3 BRACKET

- 1) MATERIAL: 6061-T6/T651 (QQ-A-250/11 OR QQ-A-200/8 OR QQ-A-225/8)
(REF. DART SPEC M6061T6S OR M6061T6B)
- 2) BREAK ALL SHARP EDGES 0.005 TO 0.010
- 3) FINISH: POWDER COAT GREY SANDTEX (4.3.5.6) PER DART QSI 005 4.3
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED
- 5) ALL DIMENSIONS ARE IN INCHES

Copyright © 2003 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE		By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries